



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,168	04/19/2006	Nobuyuki Miroku	9694-000041/US/NP	7347

52800 7590 11/26/2007

GREGORY A. STOBBS  
5445 CORPORATE DRIVE  
SUITE 400  
TROY, MI 48098

EXAMINER
----------

KAYRISH, MATTHEW

ART UNIT	PAPER NUMBER
----------	--------------

2627

MAIL DATE	DELIVERY MODE
-----------	---------------

11/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/576,168

Applicant(s)

MIROKU ET AL.

Examiner

Matthew G. Kayrish

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 9/13/2007, with respect to the rejection of claim 1 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of Suzuki (US PG-Pub 2004/0008602) and Liao et al (US PG-Pub 2003/0161253).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki, in view of Liao et al.

Regarding claim 1, Suzuki discloses:

A disk apparatus comprising:

A stationary frame as a stationary side (figure 44, item 120); and

A floating unit (figure 1, item 11) which has a function to record data on and/or reproduce the data from a disk-shaped recording medium inserted into said disk apparatus (paragraph 99);

Wherein said floating unit includes:

A disk-carrying means (figure 1, item 20), which carries said disk-shaped recording medium inserted from a disk insertion/extraction port (abstract) formed on said stationary frame (figure 1);

A disk-clamping means (figure 5, item 14), which clamps said disk-shaped recording medium at a recording/reproducing position (paragraph 101);

A disk recording/reproducing-driving means (figure 11, item 60), which rotates said disk-shaped recording medium to record the data on or reproduce the data from said disk-shaped recording medium (paragraph 3);

An electric circuit board (paragraphs 137, 153 & 165, three circuit boards) having an electric circuit which controls the driving of said disk-carrying means, said disk-clamping means and said disk recording/reproducing driving means (paragraphs 179 & 180, figures 42 & 43); and

Disk insertion-detecting levers (figure 19, item 92) which are disposed in the proximity of said disk insertion/extraction port (figure 19), and which are pressed down and rotated by the outer edge of said inserted disk-shaped recording medium (paragraph 137), so as to directly drive a switch which outputs a disk detection signal to said electric circuit (paragraph 137).

Suzuki fails to specifically disclose:

A floating unit, which is disposed in said stationary frame through elastic component.

Liao discloses:

A floating unit (figure 2, items 10-14 and 20), which is disposed in said stationary frame (figure 2, item 50) through elastic component (figure 2, items 40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the floating member of Suzuki to the stationary member through elastic dampers, as taught by Liao, because this will help to absorb vibrations, as stated in paragraph 2.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki and Liao et al, as applied to claim 1 above, and further in view of Yamanaka (US Patent Number 6754901).

Regarding claim 2, Suzuki and Liao disclose the features of base claim 1, as stated in the 103 rejection above, but fail to specifically disclose:

Wherein said disk insertion-detecting levers are disposed in the proximity of both sides of said disk insertion/extraction port, and wherein each of said disk insertion-detecting levers has a blade-shaped part which is spread to both sides and is a little raised at its both ends, and a projection which presses the switch of said electric circuit board, when said disk insertion-detecting lever is rotated.

Yamanaka discloses:

Wherein said disk insertion-detecting levers are disposed in the proximity of both sides of said disk insertion/extraction port (figure 1, items 7 on sides of item 3), and wherein each of said disk insertion-detecting levers has a blade-shaped part which is spread to both sides (figure 7C) and is a little raised at its both ends (figure 4, item 7C

extends away from the plane of item 7A), and a projection which presses the switch of said electric circuit board (figure 4, item 21), when said disk insertion-detecting lever is rotated (column 3, lines 27-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the drive of Suzuki with insertion detection levers having blades and contacts on both sides of the insertion slot, as taught by Yamanaka, because the switches can provide information about the size of the disk, as stated in column 1, lines 41-63.

Regarding claim 3, Suzuki, Liao and Yamanaka disclose the features of base claims 1 or 2, as stated in the 103 rejections above, but Suzuki fails to specifically disclose:

Wherein an ejection-detecting lever is disposed in the proximity of said disk insertion-detecting lever, and is pressed down and rotated by the outer edge of said disk-shaped recording medium, so as to output, to said electric circuit, a signal which indicates the detection of the ejection of said disk-shaped recording medium.

Yamanaka discloses:

Wherein an ejection-detecting lever is disposed in the proximity of said disk insertion-detecting lever (figure 4, insertion switch is same as ejection switch), and is pressed down and rotated by the outer edge of said disk-shaped recording medium, so as to output, to said electric circuit, a signal which indicates the detection of the ejection of said disk-shaped recording medium (columns 5 & 6, lines 19-32 & 10-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide for the insertion detection lever of Suzuki to also act as an ejection detection lever, as taught by Yamanaka, because this will limit the number of parts used in the disc drive and will tell the loading motor when to stop ejecting when the disc has reached a location where the user can grab it, as implied in columns 5 & 6, lines 19-32 & 10-20.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew G. Kayrish whose telephone number is 571-272-4220. The examiner can normally be reached on 8am - 5pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number:  
10/576,168  
Art Unit: 2627

Page 7

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Matthew G. Kayrish

11/20/2007

MGK

Handwritten signature of Brian E. Miller and the date 11/20/07.

**Brian E. Miller /Brian E. Miller/  
Primary Patent Examiner AU2627**